

-1- (JAPIO)  
ACCESSION NUMBER 86-140066  
TITLE ZINC ALKALI BATTERY  
PATENT APPLICANT (2000582) MATSUSHITA ELECTRIC IND CO LTD; (2000618)  
MITSUI MINING & SMELTING CO LTD  
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PATENT NUMBER 86.06.27 J61140066, JP 61-140066  
APPLICATION DETAILS 84.12.12 84JP-262139, 59-262139  
SOURCE 86.11.14 SECT. E, SECTION NO. 454; VOL. 10, NO. 337,  
PG. 25.  
INT'L PATENT CLASS H01M-004/42; C22C-018/00  
JAPIO CLASS 42.9 (ELECTRONICS--Other); 12.2 (METALS--Metallurgy  
Heat Treating); 12.3 (METALS--Alloys)  
ABSTRACT PURPOSE: To obtain a low pollution zinc alkali  
battery by employing zinc alloy containing Ni and Al  
within proper content for the negative pole thereby  
reducing the hardening rate of negative pole zinc.  
CONSTITUTION: Zinc alloy containing 0.01-0.5wt% of  
nickel and 0.005-0.2wt% of aluminum is employed for  
the negative pole of zinc alkali battery. When adding  
both Ni and Al to negative pole alloy, remarkable  
corrosion-proof effect is achieved when compared with  
the case where said element is added independently.  
It is assumed that the dispersion suppressing effect  
of mercury into the alloy is further improved by  
adding Ni and Al to zinc while corrosion resistance  
is improved considerably by reducing the surface area  
of zinc alloy particle thus to exhibit complex  
effect. Remarkable complex effect is recognized only  
when the content of Ni and Al in zinc alloy  
composition is within said range. Consequently, a  
zinc negative pole having low hardening rate is  
obtained.